

Application No. 10/763,463
Amendment dated March 1, 2005
Reply to Office Action of November 3, 2004

REMARKS/ARGUMENTS

Responsive to the Official Action mailed November 3, 2004, applicants have amended the claims of their application in an earnest effort to place this case in condition for allowance. Specifically, claims 13, 25, 30, and 32 have been canceled, and independent claims 1, 15, 29, and 31 amended. Reconsideration is respectfully requested.

As suggested by the Examiner, applicants have revised their application to provide the appropriate cross-reference to their related applications.

The Examiner's objection to the Declaration of Inventor Anderson is noted. A corrected Declaration executed by Inventor Anderson will be forwarded to the Office as soon as it is received back from the inventor.

In rejecting the pending claims under 35 U.S.C. §102 and §103, the Examiner has relied upon U.S. Patent No. 5,807,458, to Sanders et al., and PCT Publication No. WO 00/49211. However, it is respectfully maintained that these references, even when combined, do not teach or suggest applicants' novel method and unitized fibrous concrete reinforcement construct, and accordingly, the Examiner's rejections are respectfully traversed.

As discussed in the specification, the present invention is directed to a highly efficient method for introducing reinforcing fibrous components in a cementitious mixture, thereby desirably enhancing the performance characteristics of the mixture.

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The present method contemplates that a plurality of unitized fibrous constructs are provided, wherein each construct comprises two or more reinforcing fibrous components, and one or more circumferential retaining elements.

Notably, the circumferential retaining element for each of the unitized fibrous constructs extends *spirally* and circumscribes an overall circumference defined by the combined, essentially parallel reinforcing fibrous components, with the circumferential retaining element circumscribing *no more than 80%* of the total surface area of the unitized fibrous constructs.

Configuration of the unitized fibrous constructs in this fashion promotes their efficient manufacture, and the intended dispersal of the reinforcing fibrous components in the associated cementitious mixture. Formation of an elongated grouping of the reinforcing fibrous components, which are spirally wound with the associated circumferential retaining elements, permits individual ones of the unified fibrous constructs to be formed by scission of the substantially continuous construct in a highly efficient fashion. As noted at page 5 of the specification, configuring the circumferential retaining element to circumscribe no more than 80% of the total surface area of the unitized fibrous construct desirably serves to expose a significant and useful proportion of the reinforcing components within the unitized construct to the external environment, such that upon mechanical agitation of the constructs in a cementitious mixture, the circumferential retaining element is disrupted, allowing for the homogeneous release,

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distribution, and dispersion of the reinforcing fibrous components into the overall cementitious mixture.

It is respectfully maintained that neither of the prior art references cited by the Examiner teach or suggest applicants' novel method. The cited Sanders et al. patent discloses primary packages of reinforcing elements 20, with a primary containment means 24 "comprising compositions whose continuity can be disrupted", by formation of the containment means by "compositions suitable for use in aqueous cementitious compositions, such as cellulose based papers (column 2, lines 43 *et seq.*). As noted at column 4, line 36 *et seq.*:

The dispersibility, or time required to disrupt the continuity of the primary containment means sufficiently to cause the release [of] the reinforcing elements, can be controlled by the basis weight of the water dispersible packaging means, the type of binder, and the binder incorporation level.

Notably, the Sanders et al. patent is specifically limited in its teachings to the fabrication of cylindrical primary packages "in a spiral overlap manner" (column 5, line 6). Moreover, the Sanders et al. patent specifically *teaches away* from applicants' claimed unitized fibrous construct where it states:

The dispersion of the primary packages of reinforcing elements 20 can be extended by utilizing a higher basis weight primary containment means, by utilizing a primary containment means having a higher binder add-on, or simply by *increasing the amount of overlap or the number of overlapping layers* of the primary containment means 24 (emphasis supplied).

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It is believed that it will be readily appreciated that the cited PCT publication clearly fails to overcome the deficiencies in the teachings of Sanders et al. in teaching or suggesting the present invention as claimed. This PCT publication contemplates an arrangement for packeting fibers for castable compositions, including *binding only the ends* of fibers 12 arranged in a side-by-side manner. As stated at page 6:

The term "dispersible binder material" means and refers to materials which function to bind the *terminal fiber ends* together and which can dissolve and/or abrade within the castable composition (e.g., concrete).

There is clearly no teaching of providing a retaining element or interlocking means which *extends spirally*, much less any teaching of configuring such a component to extend spirally, while circumscribing no more than 80% of the total surface area of the associated unitized fibrous constructs.

Applicants respectfully note that the subject matter of the present application has proved to be very commercially significant, and applicants would be pleased to provide samples of the present unitized fibrous constructs for the Examiner's consideration.

In view of the foregoing, formal allowance of claims 1-12, 14-24, 26-29, and 31 is believed to be in order and is respectfully solicited. Should the Examiner wish to speak with applicants' attorneys, they may be reached at the number indicated below.



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The Commissioner is hereby authorized to charge any additional fees which may be required in connection with this submission to Deposit Account No. 23-0785.

Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that this paper is being deposited with the United States Postal Service with sufficient postage at First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on **March 1, 2005**.

